



SEQUENCE LISTING

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Yoo, So Yeon
Ahn, Ji Hoon
Choi, Yang Do

<120> Gene Controlling Flowering Time of Plants and Method for
Manipulating Flowering Time of Plant Using the Same

<130> 1012679-000105

<140> US 10/780,703

<141> 2004-02-19

<150> KR 10 2003 10772

<151> 2003-02-20

<160> 12

<170> PatentIn version 3.3

<210> 1

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<212> DNA

<213> Arabidopsis thaliana

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<221> CDS

<222> (1)..(1137)

<223> cDNA of LOV1 gene

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gtc aac aat aac gaa aaa ggt ata gaa gac aat gat cat aga ggc ggc	96
Val Asn Asn Asn Glu Lys Gly Ile Glu Asp Asn Asp His Arg Gly Gly	
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caa gag agt cat gtc caa aat gaa gat gaa gct gat gat cat gat cat	144
Gln Glu Ser His Val Gln Asn Glu Asp Glu Ala Asp Asp His Asp His	
35 40 45	
gac atg gtc atg ccc gga ttt aga ttc cat cct acc gaa gaa gaa ctc	192
Asp Met Val Met Pro Gly Phe Arg Phe His Pro Thr Glu Glu Glu Leu	
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ata gag ttt tac ctt cgc cga aaa gtt gaa ggc aaa cgc ttt aat gta	240
Ile Glu Phe Tyr Leu Arg Arg Lys Val Glu Gly Lys Arg Phe Asn Val	
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gaa ctc atc act ttc ctc gat ctt tat cgc tat gat cct tgg gaa ctt	288
Glu Leu Ile Thr Phe Leu Asp Leu Tyr Arg Tyr Asp Pro Trp Glu Leu	
85 90 95	

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Gln Glu Ser His Val Gln Asn Glu Asp Glu Ala Asp Asp His Asp His
 35 40 45

Asp Met Val Met Pro Gly Phe Arg Phe His Pro Thr Glu Glu Glu Leu
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Ile Glu Phe Tyr Leu Arg Arg Lys Val Glu Gly Lys Arg Phe Asn Val
 65 70 75 80

Glu Leu Ile Thr Phe Leu Asp Leu Tyr Arg Tyr Asp Pro Trp Glu Leu
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Pro Ala Met Ala Ala Ile Gly Glu Lys Glu Trp Tyr Phe Tyr Val Pro
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Arg Asp Arg Lys Tyr Arg Asn Gly Asp Arg Pro Asn Arg Val Thr Thr
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Ser Gly Tyr Trp Lys Ala Thr Gly Ala Asp Arg Met Ile Arg Ser Glu
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Thr Ser Arg Pro Ile Gly Leu Lys Lys Thr Leu Val Phe Tyr Ser Gly
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Lys Ala Pro Lys Gly Thr Arg Thr Ser Trp Ile Met Asn Glu Tyr Arg
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Leu Pro His His Glu Thr Glu Lys Tyr Gln Lys Ala Glu Ile Ser Leu
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Cys Arg Val Tyr Lys Arg Pro Gly Val Glu Asp His Pro Ser Val Pro
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Arg Ser Leu Ser Thr Arg His His Asn His Asn Ser Ser Thr Ser Ser
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Arg Leu Ala Leu Arg Gln Gln Gln His His Ser Ser Ser Ser Asn His
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Ser Asp Asn Asn Leu Asn Asn Asn Asn Asn Ile Asn Asn Leu Glu Lys
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Leu Ser Thr Glu Tyr Ser Gly Asp Gly Ser Thr Thr Thr Thr Thr Thr
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Asn Ser Asn Ser Asp Val Thr Ile Ala Leu Ala Asn Gln Asn Ile Tyr
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Arg Pro Met Pro Tyr Asp Thr Ser Asn Asn Thr Leu Ile Val Ser Thr
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Arg Asn His Gln Asp Asp Asp Glu Thr Ala Ile Val Asp Asp Leu Gln
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Arg Leu Val Asn Tyr Gln Ile Ser Asp Gly Ala Thr Thr Leu Met Pro
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 <223> genomic DNA of LOV1 gene

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35 40 45

Val Asp Leu Asn Lys Cys Glu Pro Trp Glu Leu Pro Glu Lys Ala Lys
50 55 60

Met Gly Glu Lys Glu Trp Tyr Phe Phe Ser Leu Arg Asp Arg Lys Tyr
65 70 75 80

Pro Thr Gly Leu Arg Thr Asn Arg Ala Thr Glu Ala Gly Tyr Trp Lys
85 90 95

Ala Thr Gly Lys Asp Arg Glu Ile Tyr Ser Ser Lys Thr Ser Ala Leu
100 105 110

Val Gly Met Lys Lys Thr Leu Val Phe Tyr Arg Gly Arg Ala Pro Lys
115 120 125

Gly Glu Lys Ser Asn Trp Val Met His Glu Tyr Arg Leu Asp Gly Lys
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Phe Ala Tyr His Tyr Ile Ser Arg Ser Ser Lys
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35 40 45

Cys Ala Ala Ile Ser Gln Val Asp Leu Asn Lys Ser Glu Pro Trp Glu
50 55 60

Leu Pro Glu Lys Ala Lys Met Gly Glu Lys Glu Trp Tyr Phe Phe Thr

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Leu Arg Asp Arg Lys Tyr Pro Thr Gly Leu Arg Thr Asn Arg Ala Thr	85		90		95	
Glu Ala Gly Tyr Trp Lys Ala Thr Gly Lys Asp Arg Glu Ile Lys Ser	100		105		110	
Ser Lys Thr Lys Ser Leu Leu Gly Met Lys Lys Thr Leu Val Phe Tyr	115		120		125	
Lys Gly Arg Ala Pro Lys Gly Glu Lys Ser Cys Trp Val Met His Glu	130		135		140	
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Arg Lys Tyr Pro Thr Gly Leu Arg Thr Asn Arg Ala Thr Glu Ala Gly	85	90	95	
Tyr Trp Lys Ala Thr Gly Lys Asp Arg Glu Ile Phe Ser Ser Lys Thr	100	105	110	

Cys Ala Leu Val Gly Met Lys Lys Thr Leu Val Phe Tyr Lys Gly Arg
115 120 125

Ala Pro Lys Gly Glu Lys Ser Asn Trp Val Met His Glu Tyr Arg Leu
130 135 140

Glu Gly Lys Phe Ser Tyr His Phe Ile Ser Arg Ser Ser Lys
145 150 155